



Accelerating Innovation through Information Technology and Enterprise Modernization

Leigh Williamson, Chief Technology Officer Team
IBM Software, Rational

IBM Software

Innovate2011

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Software. Everywhere.

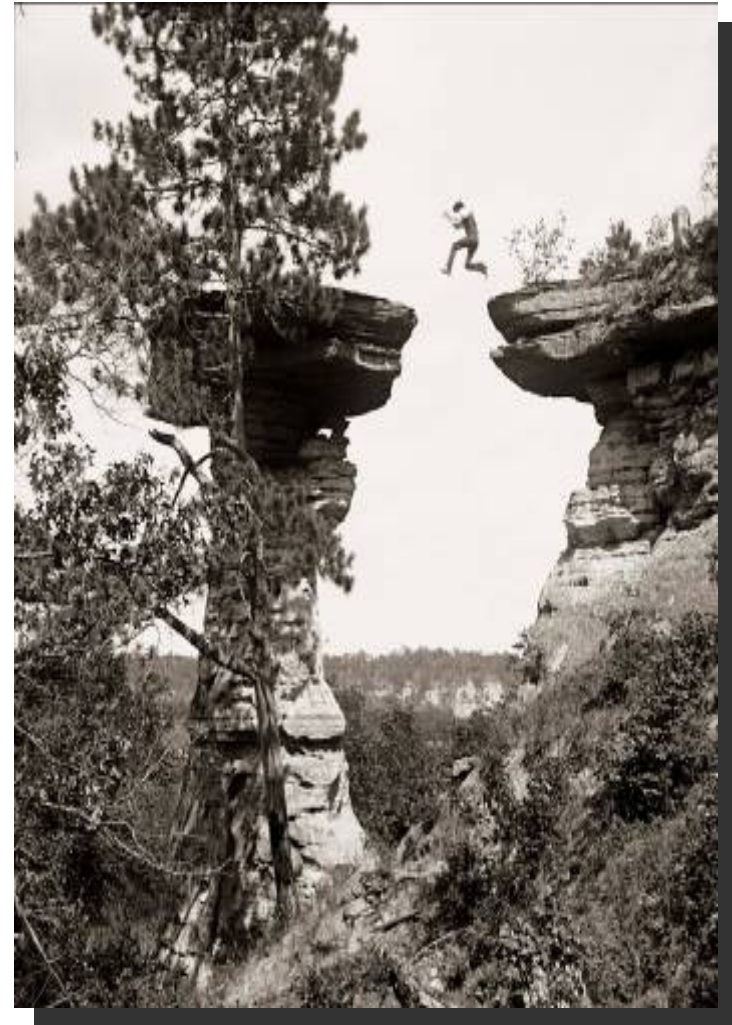
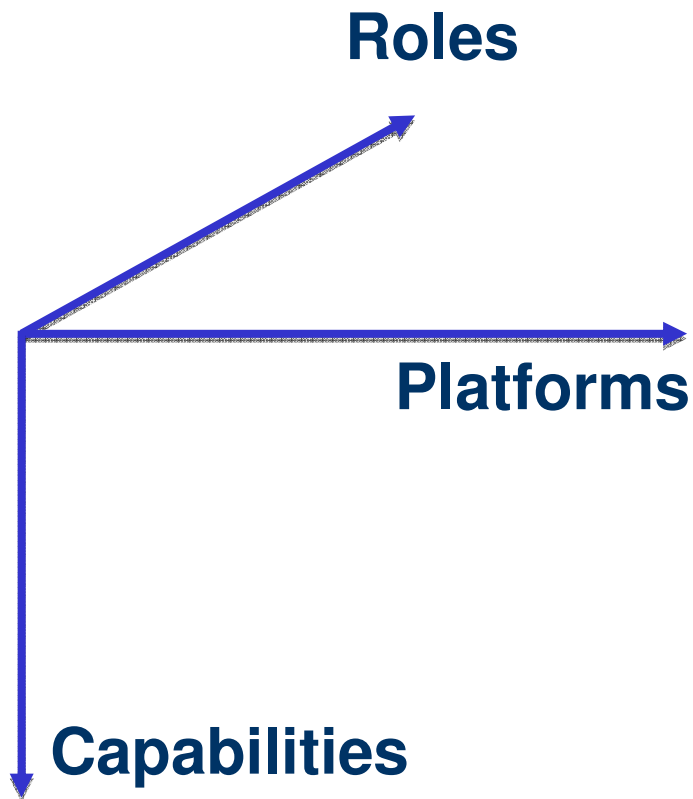
August 9-11, Bangalore | August 11, Delhi



What do teams need to improve their efficiency?



Integration Dimensions



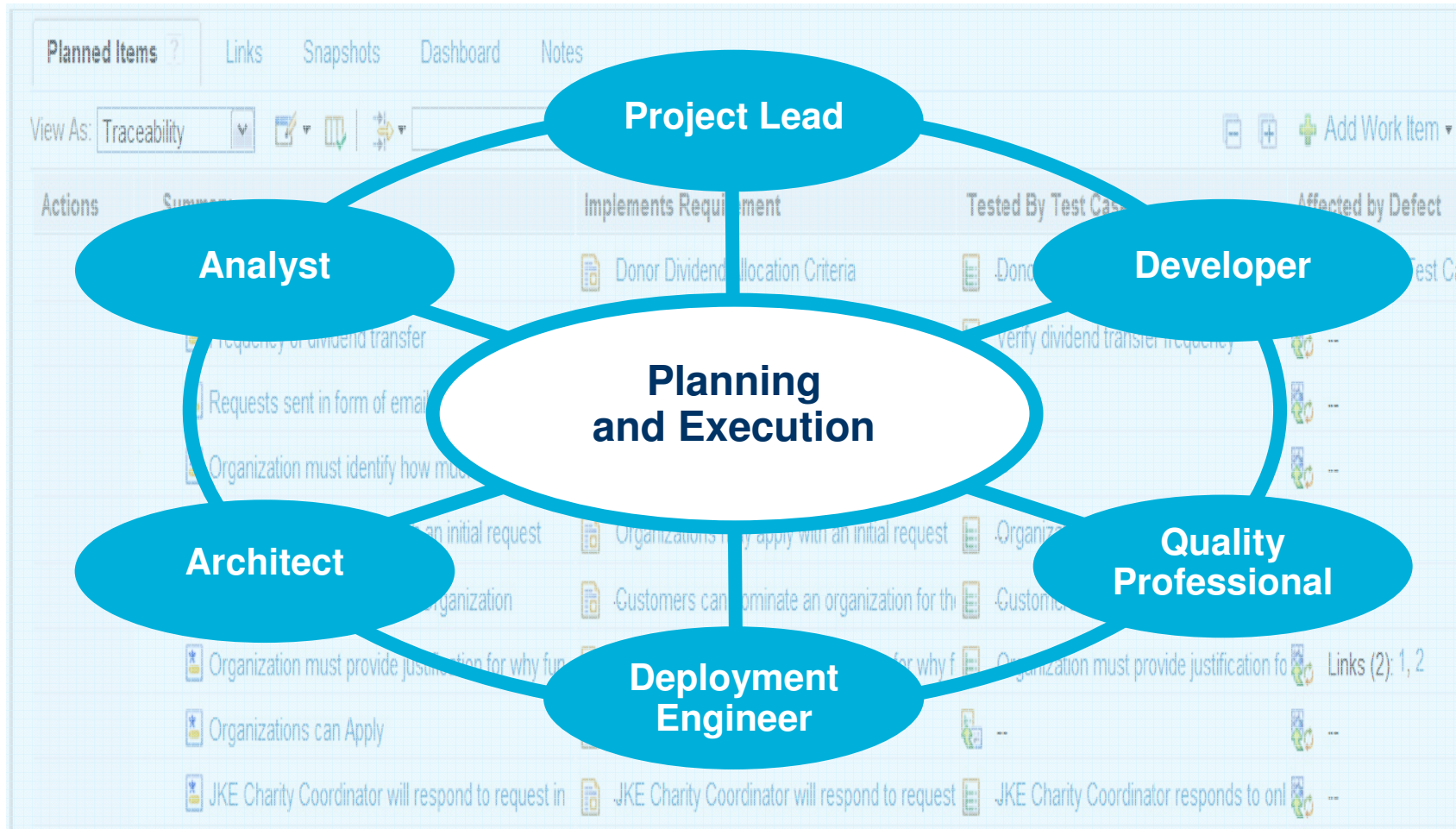
The Five Imperatives of Application Lifecycle Management

Improve productivity 4-6% annually

1. Accelerate **time to delivery** with real-time planning
2. Improve **quality** with lifecycle traceability
3. Maximize **time to value** with in-context collaboration
4. Refine **predictability** with development intelligence
5. Reduce **costs** with continuous improvement



Imperative 1: Real-Time Planning



Task Board

Change and Configuration Management (Jazz)

Rational Team Concert

Project Dashboards > Work Items > Plans > Builds > Reports >

All Rational Team Concert Dashboards > Rational Team Concert > RTC Development >

Tracking and Planning

General Buildmeister Wallboard **Work Item Taskboard** Planning Taskboard

Work Item Taskboard

Taskboard for the Work Item team for the current sprint.

Story	Open	In Progress
<p>✓ Need a mechanism to automatically</p>	<p>Create tech note on the use of "comment" as a</p> <p>Article about contributing WEB UI presentations</p> <p>Improve Work Item web WorkItemProxy</p> <p>Update http://jazz.net/library</p>	<p>⚙ Restricted access presentations</p> <p>2 hours</p> <p>30 minutes</p> <p>1 hour</p> <p>2 hours</p> <p>4 hours</p> <p>1 day</p> <p>2 days</p> <p>3 days</p> <p>1 week</p> <p>g ly Viewed f run</p> <p>Layout issues on "Link To Existing Defect" dialog</p> <p>e Away does not work item</p> <p>Queries marked "changed" on opening or just</p>

Imperative 2: Lifecycle Traceability

Instant access to details from any point in the development process



Requirements – Development

Requirements Management (RM)

Rational Requirements Composer (RM)

Requirements Dashboard Artifacts Collections Reports

Rational Requirements Composer (RM) > Release Scope (DCP) >

483: User Requirements Planned for RRC

Page size: 20

Previous | 1 2 | Next

ID	Name	Artifact Type	Implemented By
296	Common - Linking		
315	Common - User Dashboards		
		User Requirement	99047: Improve and deepen traceability links & views, add support impact/suspect links
		User Requirement	151399: RM - User Dashboard Layout Controls
		User Requirement	148456: RM - Audit Trail Change History and Audit Trail Change cc
		User Requirement	151401: RM - Query/filter and sort based on Reqt. Attributes (quick
		User Requirement	148454: RM - Rich Text Editing for Requirements Elicitation and D
		User Requirement	151402: RM - Document Picture/Graphics Support
		User Requirement	141432: RM - Text and graphical embedding in a rich-text artifact
		User Requirement	151404: RM - Requirements Collections and Baselines
		User Requirement	148938: RM - Relationships for Traceability Structure
324	Common - Multi-level Traceability View	User Requirement	148455: RM - Multi-level Traceability View

Filter by Attribute

- Name
- Artifact type
- Last modified by
- Last modified on
- Limit by lifecycle status: Development
Items: Open
- More attributes
- Linked artifacts

Development – Test

CLM 3.0.1 * ?

241 items: 170 open, 71 closed | Ends in: 52 days

Plan Details

Planned Items ?

Links

Snapshots

Dashboard

Definition of Done

Executive Status

Help Wanted

Notes

Planning Notes

Schedule

Wish list

View As: Coverage (131 items filtered)

Actions	Summary	Status	Tested By Test Case
	(Finish) CLM reporting	Testing	Links (26): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23
	(Finish) Define and Implement C/ALM Reports	Testing	Links (14): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
	(Finish) Provide common install for Rational Workbench for CLM	Implementi	Links (7): 1, 2, 3, 4, 5, 6, 7
	Implement C/ALM 2009/2010 to C/ALM 2011 upgrade strategy a	Testing	Links (6): 1, 2, 3, 4, 5, 6
	(Finish) Implement uniform licensing model	Testing	Links (22): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22
	(Finish) Common administration of a project	Testing	Links (5): 1, 2, 3, 4, 5
	(Finish) Support work items as a service	Ready to Test	Links (3): 1, 2, 3
	Support RQM local Defect enhancements in C/ALM setup	Testing	Links (4): 1, 2, 3, 4
	Improve CLM Usability	Ready to Test	Links (8): 1, 2, 3, 4, 5, 6, 7, 8
	Decouple built-in Requirements from RQM	Testing	Links (7): 1, 2, 3, 4, 5, 6, 7
	Improve and deepen traceability links & views, add support for c	Testing	Links (5): 1, 2, 3, 4, 5
	Test Case? Complete OSLC v2 support "Must" specification level	Ready to Test	--
	increase Developer self-host on CLM	Testing	--
	Towards UI Conformance and a common UI Style	Ready to Test	Links (10): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
	CLM - Common Sample: Adopt a common sample application {	Testing	Links (2): 1, 2

Add Tested By Test Case...

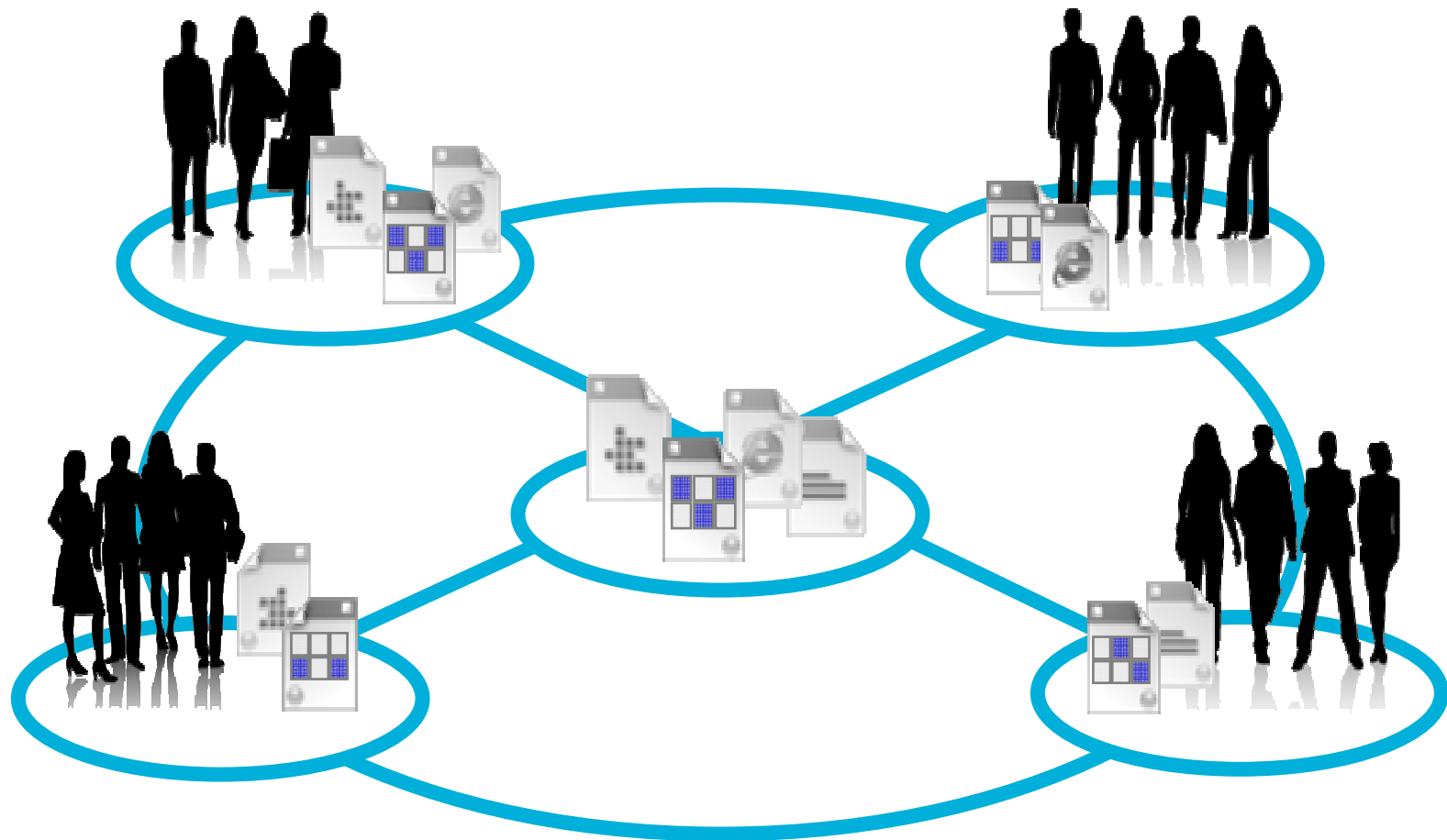
Test Case? Complete OSLC v2 support "Must" specification level Ready to Test

The screenshot shows the Jazz Collaborative ALM interface. A 'Create New Defect' dialog box is open, with 'Type' set to 'Defect' and the description 'Failing Test Case "CLM Smoke/BVT Test" when executing Test Execution Record "CLM Smoke Test"'. The background shows the 'Defect 149938' detail view, which includes a summary, tabs for Overview, Links, Approvals, and History, an Attachments section, and a Links section with related items like 'Affects Test Result', 'Related Test Case', 'Related Test Plan', and 'Affects Plan Item'. A 'No Links' message is visible on the right side of the dialog.

We run the script as a single USER and create a new USER and assign it the corresponding role in User Management.

- Go to <https://clmwb:9443/jts/admin> > User Management and create a new user USER

Imperative 3: In-Context Collaboration



- 27. Sanket Jain May 26, 2011 3:57 PM
Build and Deploy Status -

- The latest build `rtc.jcb RTC-I20110525-2359` is RED due to Workitem JUnit Test failure - Defect 162255
- Manually promoted `rtc.jcb RTC-I20110525-2359` build
- `rtc.jcb RTC-I20110525-2359` build is based on `foundation.stable.jcb RJF-I20110525-2115`
- 28. Johannes Rieken May 26, 2011 6:02 PM
Rejected because we had two deliveries today
- 29. Sonia Dimitrov May 26, 2011 6:09 PM

Given the jazzdev outage scheduled for 8 pm ET this evening, I would like to move the 4:30 pm build up to 2 pm with the aim to get a CLM build based on this to allow testers in India to test a fix for [defect 167061](#).

`@martina` - can you get the fix for [defect 167061](#) delivered before 2 pm ET?
`@dassarma` - is it possible to get a CLM build based on a `rtc.jcb` build that will complete around 8 pm?
- 30. John Camelon May 26, 2011 7:15 PM
Rejected as we will be wanting to include [work item 167296](#).
- 31. Tim Mok May 26, 2011 7:43 PM
Delivered change for [work item 167296](#) to RTC Integration.
- 32. Martha DasSarma May 26, 2011 8:14 PM

`@sdimitro` re comment 29. The `rtc.jcb` build is taking around 6 hours and 30 minutes. Not sure if one will get done before the outage at 8PM and I don't see one running yet. I will keep an eye.
- 33. Sonia Dimitrov May 26, 2011 9:21 PM

Given the outage, the next complete `rtc.jcb` build should complete sometime around 5 am ET tomorrow (Fri). The 10:30 pm build has been pushed to 11:15 pm.
- 34. Jared Burns May 26, 2011 11:18 PM

Rejecting due to required CAL changes being tracked in [Update CLM CALs due to change of process authoring operation IDs \(167392\)](#)
- 35. Sanket Jain May 27, 2011 10:22 AM
Build and Deploy Status -

- The latest build `rtc.jcb RTC-I20110526-2015` is green and is based on `foundation.stable.jcb RJF-I20110526-1745`
- `rtc.jcb RTC-I20110526-2015` has been deployed to `jbslnxvh04`.
- 36. Sonia Dimitrov May 27, 2011 1:44 PM

I have created a new approval item and moved some folks over based on new contributions between `rtc.jcb RTC-I20110526-2015` and `rtc.jcb RTC-I20110525-2359`.
- 37. Guy Slade May 27, 2011 3:48 PM

`SVT_RC3_W2: Binary rebuild does not rebuild COBOL file if trust output is true (165938)` has just been reopened on us. Investigating now to see what the deal is and whether we can fix it today



UX and Design 3.0.1

Change and Configuration Management (Jazz)
Julian Jones

Rational Team Concert
Search Work Items

Plan Details Edit

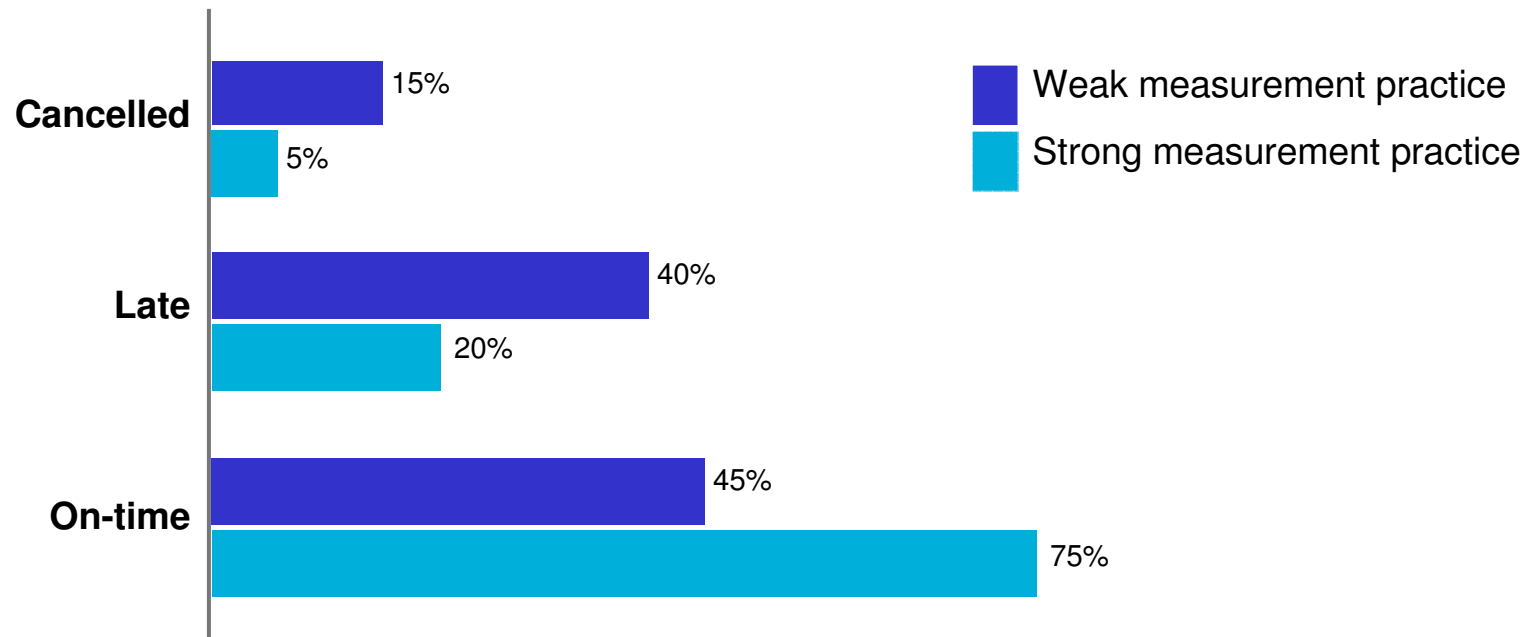
Planned Items Links Snapshots Dashboard Notes Plan - Enterprise Extensions

View As: Backlog (Legacy) (25 items filtered) Add Work Item

Actions	Summary	Priority	Progress
	3.0.1 [11/15/10 - 6/3/11] Closed Items: 25 Open Items: 8		Progress: 77.5 h Estimated: 63%
	Web UI: Required Input fields should be marked according to design specification	High	0/0 h
	[Work Items] Update Work Items web UI to 2010 common style	High	0/0 h
	Finish: UI Conformance updates for the RTC web client	Medium	0/0 pts 0/0
	User experience improvement items in RTC web and eclipse clients	High	0/0 pts 4/4
	UX reviews - RTC-EE GUIs and workflow design	Unassig	0/5 pts 2/2
	[oslc] Source Control: Design for the content of small and large previews of a change set	Medium	0/0 h
	3.0.1 M12 [11/15/10 - 1/14/11] Closed Items: 0 Open Items: 0	No Work	Progress: -- Estimated: --
	3.0.1 M13D1 [1/17/11 - 2/4/11] Closed Items: 3 Open Items: 1		Progress: 2/2 h Estimated: 100%

Imperative 4: Development Intelligence

Measurement Practices Impact Project Success



Source: Capers Jones, Measurement, Metrics and Industry Leadership, 2009 and [Software Engineering Best Practices](#), McGraw Hill, 2010.

Release Burndown

Change and Configuration Management (Jazz)

Jazz Collaborative ALM

Project Dashboards ▾ Work Items ▾ Plans ▾ Builds ▾ Reports ▾

All Jazz Collaborative ALM Dashboards >

Jazz Collaborative ALM

General Commitments, Risk Plan Item Status Incomplete Stories **Release** ▾ Deferred Current Iteration RC

CLM Blockers Reporting CLM Must Fix Defects Defects Blocking SVT CLM May Fix Defects SVT Open Defects SVT

Other May Fix Defects CLM Defect Position Enhancements CLM BMC Resolved in Last 24 Hours BMC Wishlist Managed Rate Upgrade QCERT Requirements Coverage + Add Widget

Foundation - Release Burndown

Show Parameters

Planned Work

Remaining Work

Legend: Remaining Work (blue line with dots), Planned Work (grey line)

Release Burndown

The release burndown for each

Foundation - Release Burndown

Show Parameters

Legend: Remaining Work, Planned Work

CCM - Release Burndown

Show Parameters

Plan Items

Committed Plan Items Status (83) Status

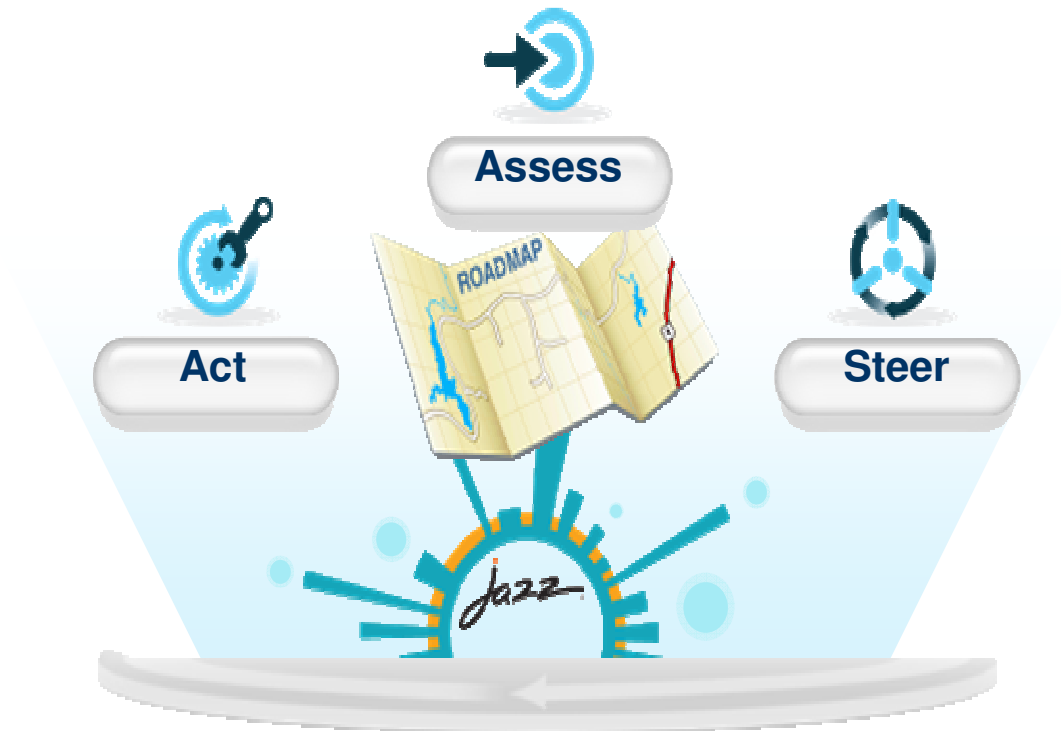
Application Dashboards

- CCM Iteration Burndown by Team
- CCM Release Burndown by Team
- JF Iteration Burndown by Team
- JF Release Burndown by Team
- QM Iteration Burndown by Team
- QM Release Burndown by Team
- RM Iteration Burndown by Team
- RM Release Burndown by Team

Information Radiators: *Wallboards*



Imperative 5: Continuous Improvement



“Successful analytics requires taking it beyond software and reporting, and into the realm of management practices and operations improvement.”

Information Management Online, February 23, 2011

Work Item Tuning

Plan Item 99050 ?

Summary: (Finish) CLM reporting

Overview Commitment Execution Done Criteria

Commitment

Testing: → Covered

Done Criteria

From the perspective of the Jazz Foundation SVT team, the Done Criteria is as follows:

-Consumability and procedure of running ETL jobs for generating report data is verified to function properly in an enterprise environment; can support complex topologies, dissimilar hardware and middleware, and long periods of time. Comfortably scores 3 or above on related consumability metrics, and no related high severity defects are unresolved.

-Consumability and procedure of creating report template is verified to function properly in an enterprise environment; can support complex topologies, dissimilar hardware and middleware, and is reliable over long periods of time. Comfortably scores 3 or above on related consumability metrics, and no related high severity defects are unresolved.

-Consumability and procedure of using report template for report creation and publishing is verified to function properly in an enterprise environment; can support complex topologies, dissimilar hardware and middleware, and long periods of time. Comfortably scores 3 or above on related consumability metrics, and no related high severity defects are unresolved.

Coverage Description

CCM Reporting passed Sanity level testing;

Distributed Windows Environment, All ETL's are passing and RRDI reports all run without error. In SVT Final more comprehensive testing will be done, including customizing sample reports, running ETL's more accurately.

Jazz Collaborative ALM

Dashboard Tuning

General | Commitments, Risk | Plan Item Status | Incomplete Stories | Release

M14 Iteration | CLM Defect Backlog | Enhancements | CLM PMC | Resolved in Last

CLM May Fix | Requirements Coverage | Accessibility Must Fix Defects

CLM Defect | Accessibility

Select Category | Select Category

- All
- Build
- Cognos
- Feeds
- General
- Help
- Process
- Project/T
- Quality M
- Rational
- Reports
- Source C
- Work Item

Add External | Add Op | Add IBM

Executive Summary

Requirements: Permit staged upgrades of independent products to CLM 2011 topology with shared JTS, no ordering imposed (JTS at latest level of all app). No 2.x rich client backward compatibility; except for RTC 3.0 clients (Eclipse/VS) compatible with CCM 3.0.1. Upgrade steps crafted to optimize CLM system outage. RTC upgrade can perform in-place (addTable) or export/import (DB change). RQM and RRC both require export/import always, RRC doing some online upgrade. LPA requires CLM 2011 applications and JTS. Datamart -> Datawarehouse automated by ETL.

Status (27/05/2011)

- RC4 FVT testing assignments in progress with concurrent doc reviews - no blockers but a lot of doc feedback to process.
- 1 QM issue (51745) impacting CLM upgrade success (rich hovers) other than that, just RM product-specific upgrade issues

Upgrade defects should be tagged with "clm30migration"

CLM 2011 Plan Items (7)

- 99043: (Finish) Support work items as a service
- 99282: (Finish) Provide common install for Rational Workbench for CLM products
- 107921: Implement C/ALM 2009/2010 to C/ALM 2011 upgrade strategy across products
- 140783: Improve CLM upgrade and deployment support
- 141069: RM - Support upgrading RRC 2.x to 3.0
- 107963: Decouple built-in Requirements from RQM
- 105103: Define C/ALM 2010 topologies and enable transition of C/ALM products to those topologies

CLM Pending Issues (14)

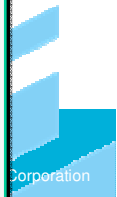
- 166643: Help the user know when their migration is complete
- 167281: Command line syntax in documentation
- 167285: Inconsistency in repotools documentation
- 160608: Migration documentation does not cover migrating the data warehouse to a different DB
- 158881: Beta doc review: installation and

CCM Pending Issues (2)

- 153523: RTC 3.0 doc on Upgrading Rational Team Concert should include switching machines
- 139412: Add instructions for a manual "feel good" method of verifying successful migration of the RTC2.X public url to RTC3.0

RM Pending Issues (22)

- 42901: Link to documentation after failed migration is not helpful
- 42637: Determine why revisions of SavedFilters are not being migrated
- 42926: Document the upgrade of project archives to RRC3x ProjectTemplates
- 42957: Add more details on - oldApplicationHome parameter in rm_upgrade.bat -help
- 43060: Migration counter is off when upgrading a large data set
- 43386: RRC Upgrade Documentation - consistency between IUG and base doc - add reminder to 'RRC manual upgrade' for Tomcat secure port
- 43545: Invalid char in resource causes Sax Parser exception
- 43570: Remove the System.out.println in ReviewXMLFilter
- 43677: Migrating Links never appears to



CLM 3.0.1

244 items: 164 open, 80 closed | Ends in: 43 days

Plan Details

Planned Items

Links Snapshots Dashboard Definition of Done Executive Status Help Wanted

View As: Coverage (119 items filtered)

Add Work Item

Plan Tuning

Coverage

Options Columns

Sorting Ranking

Filter Expression type:Enhancement

Filter Expression type:Story

Filter Expression type:"Adoption Item"

Filter Expression type:Task

Colors Coverage? boca:"Base Content" blocks:svtCoverag

Colors

Colors

Colors

Colors

Colors

Failed failingTestCases:set

More

Actions	Summary	DCP Boca	SVT Covi	Status	Tested By Test Case	Implements R
	(Finish) CLM reporting	Base Cont	Cover	Testir	Links (26): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17,	346: Com
	(Finish) Define and Implement C/ALM Reports	Base Cont	Cover	Testir	Links (14): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	--

ALM Imperatives in Action

1. Real-time planning
2. Lifecycle traceability
3. In-context collaboration
4. Development intelligence
5. Continuous process improvement



Extending Integration to Traditional Platforms

COBOL Fun Facts

200x more COBOL transactions/day than **Google searches**

5 billion new COBOL LOC yearly

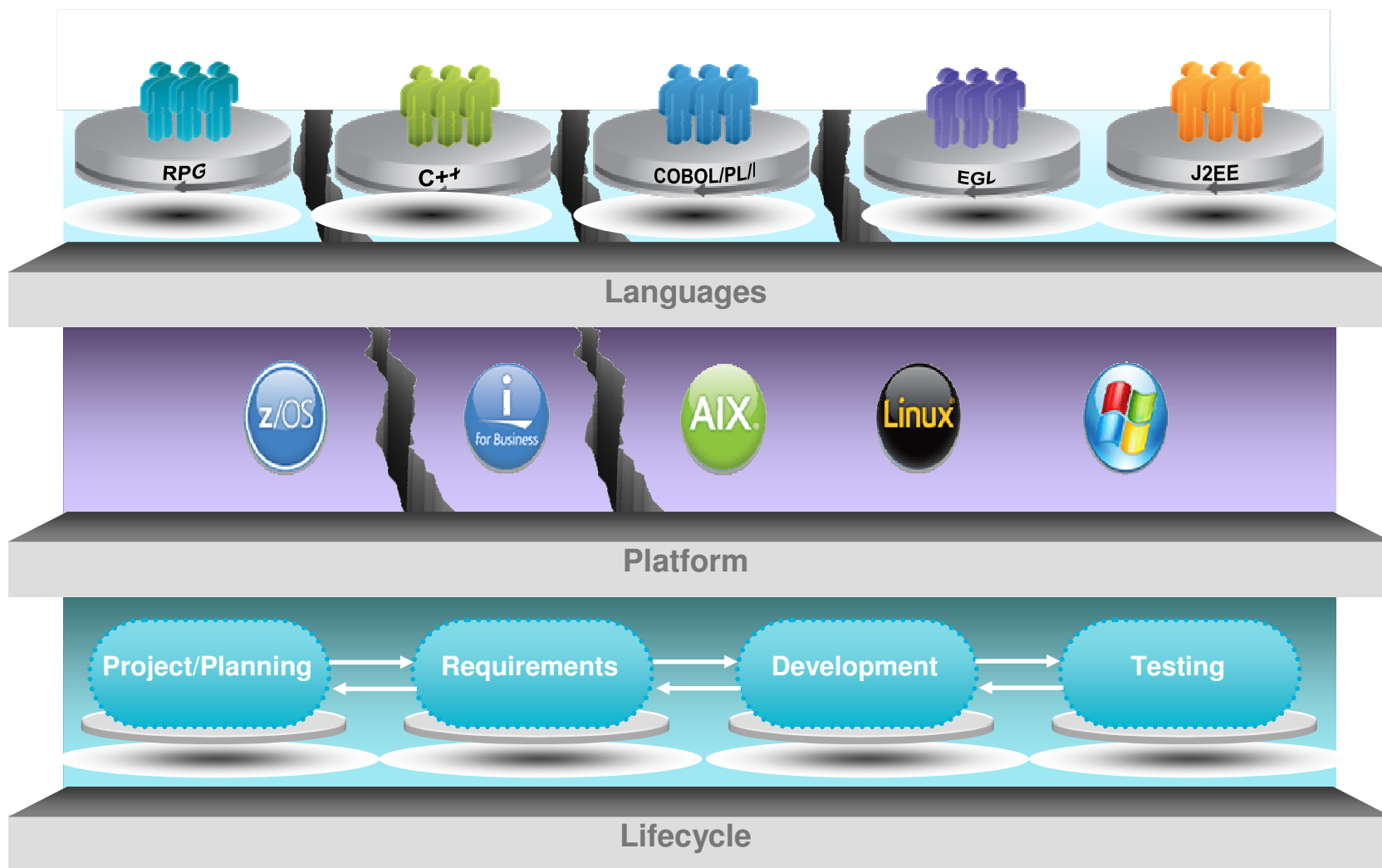
250 billion LOC of COBOL in existence

COBOL training **no longer offered** at most universities

Approximately all active code is
80% COBOL

One million COBOL
programs currently active

Remaining Enterprise Integration Barriers



ISPF...Modern? Productive?

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT
      DDS0001.TEST.COBOL (BNCHS601) - 01.07          Columns 00001 00072
      ***** Top of Data *****
      IDENTIFICATION DIVISION.
      PROGRAM-ID.  BNCHS601.
      AUTHOR.  JON SAYLES.
      INSTALLATION. COBOL DEV Center.
      DATE-WRITTEN. 01/23/88.
      DATE-COMPILED. 01/23/88.
      SECURITY. CONFIDENTIAL PATIENT DATA.

      *****
      *REMARKS.
      *
      Command ==>
      Scroll ==> PAGE

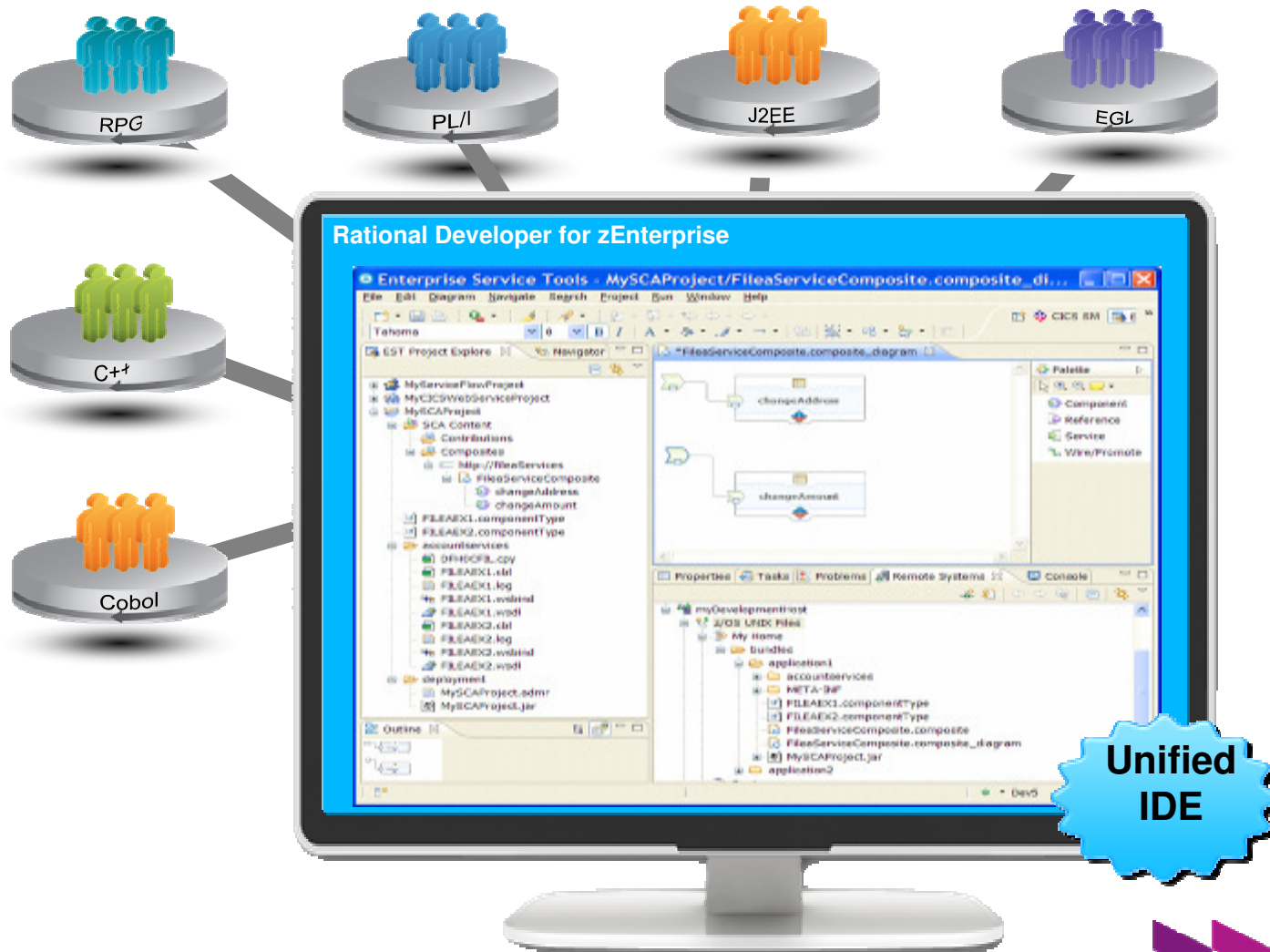
File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW
      DDS0001.TEST.COBOL (BNCHS602) - 01.02          Columns 00001 00072
      100-MAINLINE.
      MOVE "100-MAINLINE" TO PARA-NAME.
      * DISPLAY "100-MAINLINE".
      * Validate patient type and insurance coverage
      PERFORM 300-FIELD-EDITS THRU 300-EXIT.

      IF RECORD-ERROR-FOUND
      ADD +1 TO RECORDS-IN-ERROR
      PERFORM 710-WRITE-TRMTERR THRU 710-EXIT

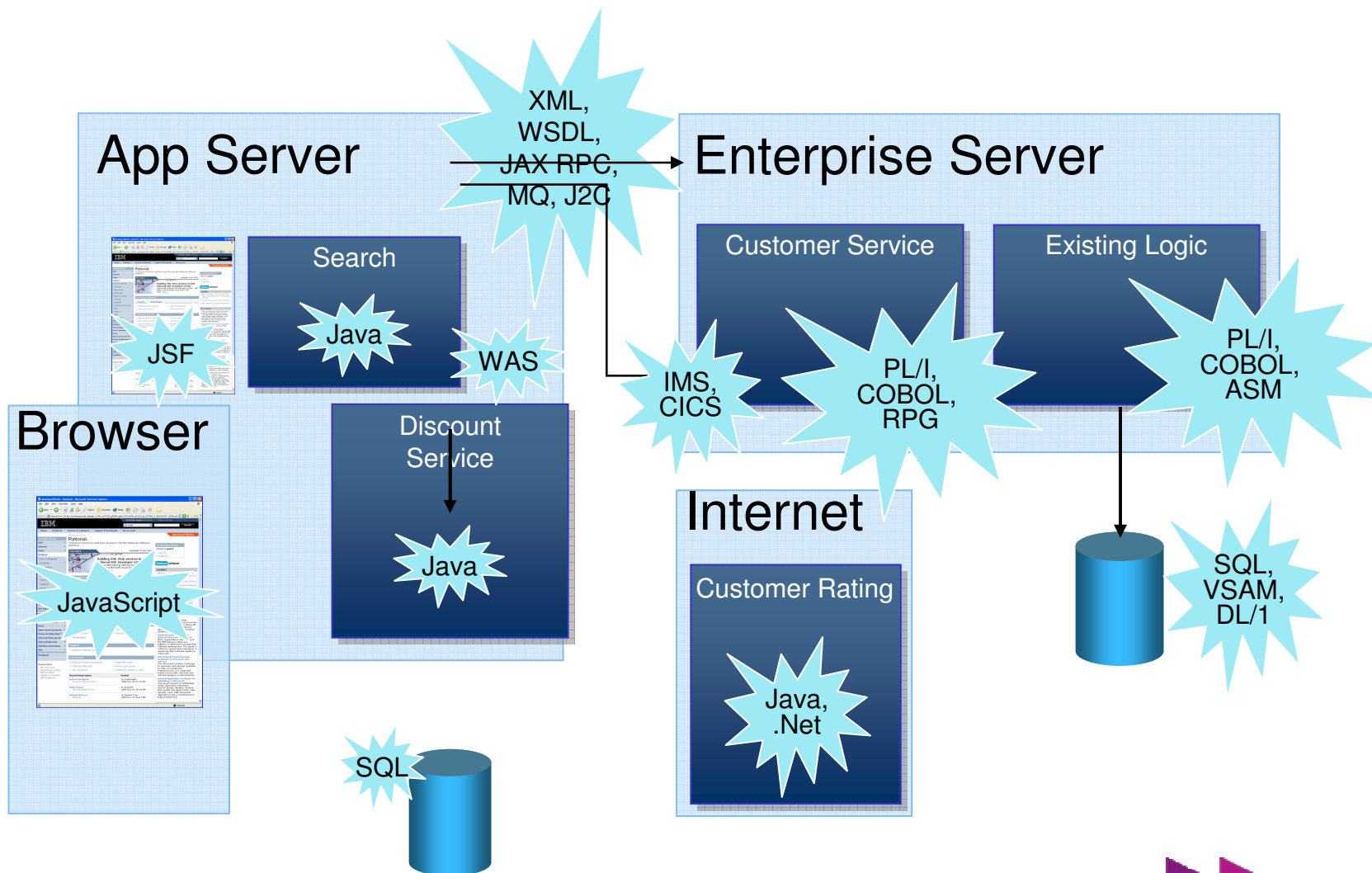
      Command ==>
      Scroll ==> PAGE

M0 a 24/006
```

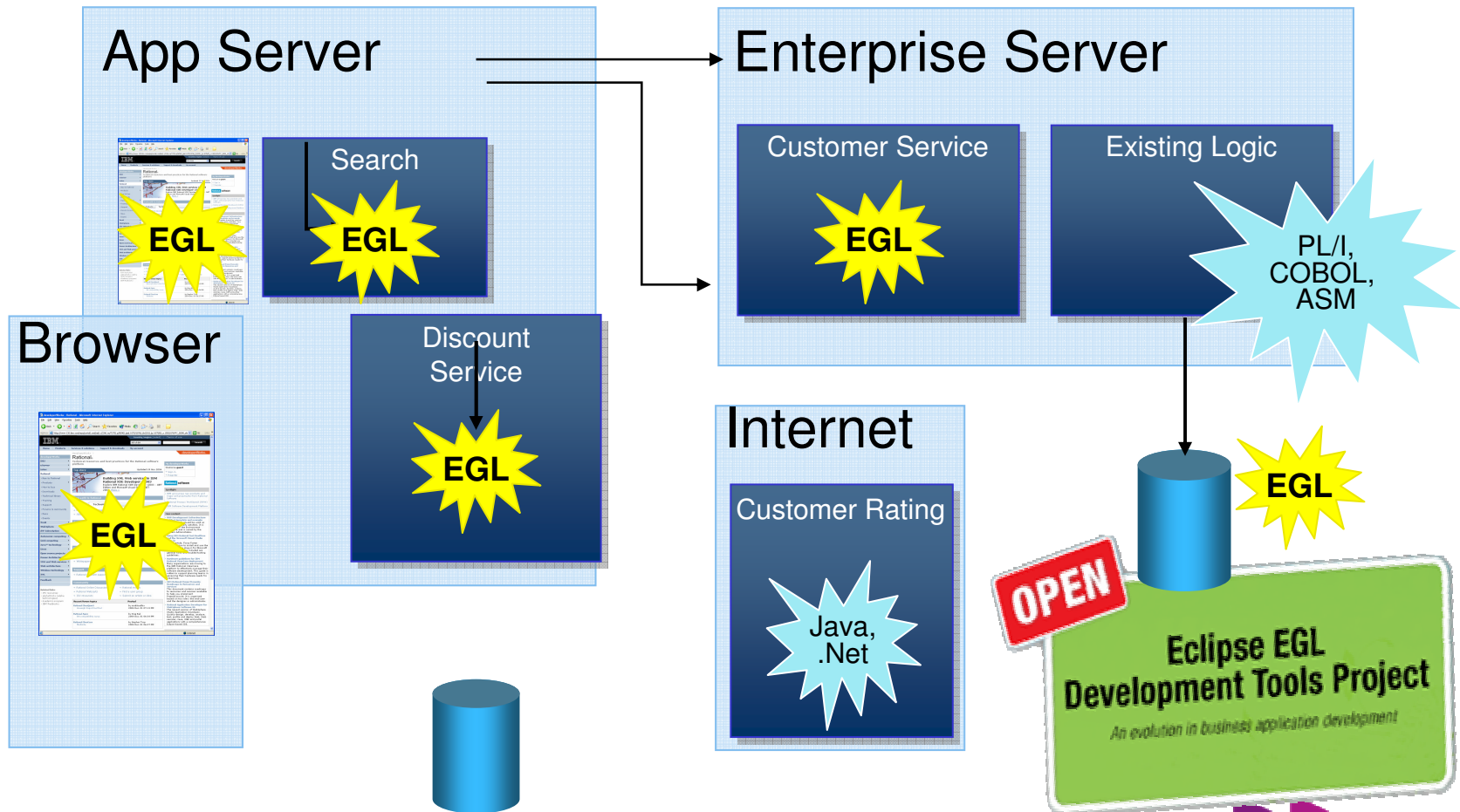
Modern and Productive!



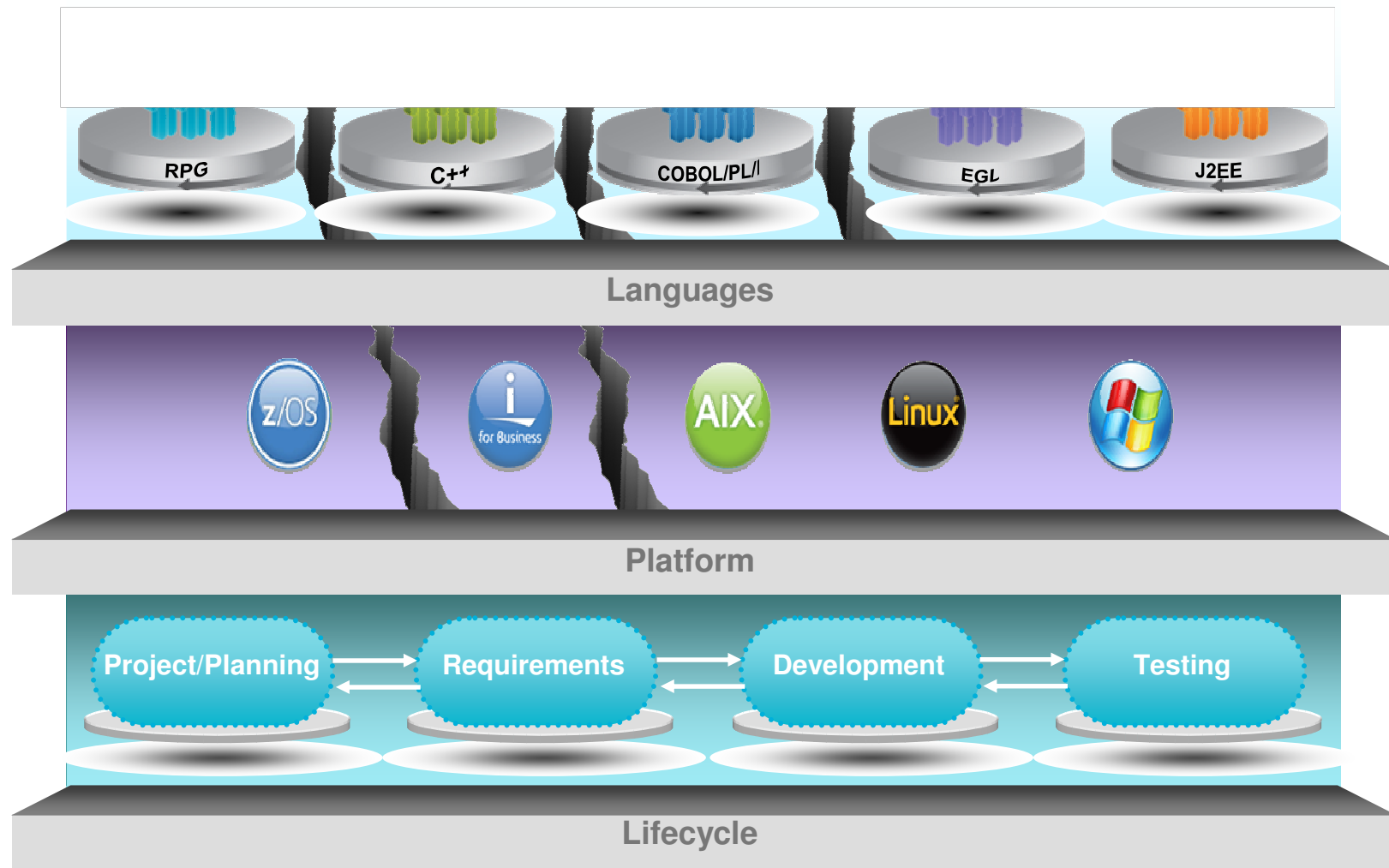
Middleware Complexities Exposed



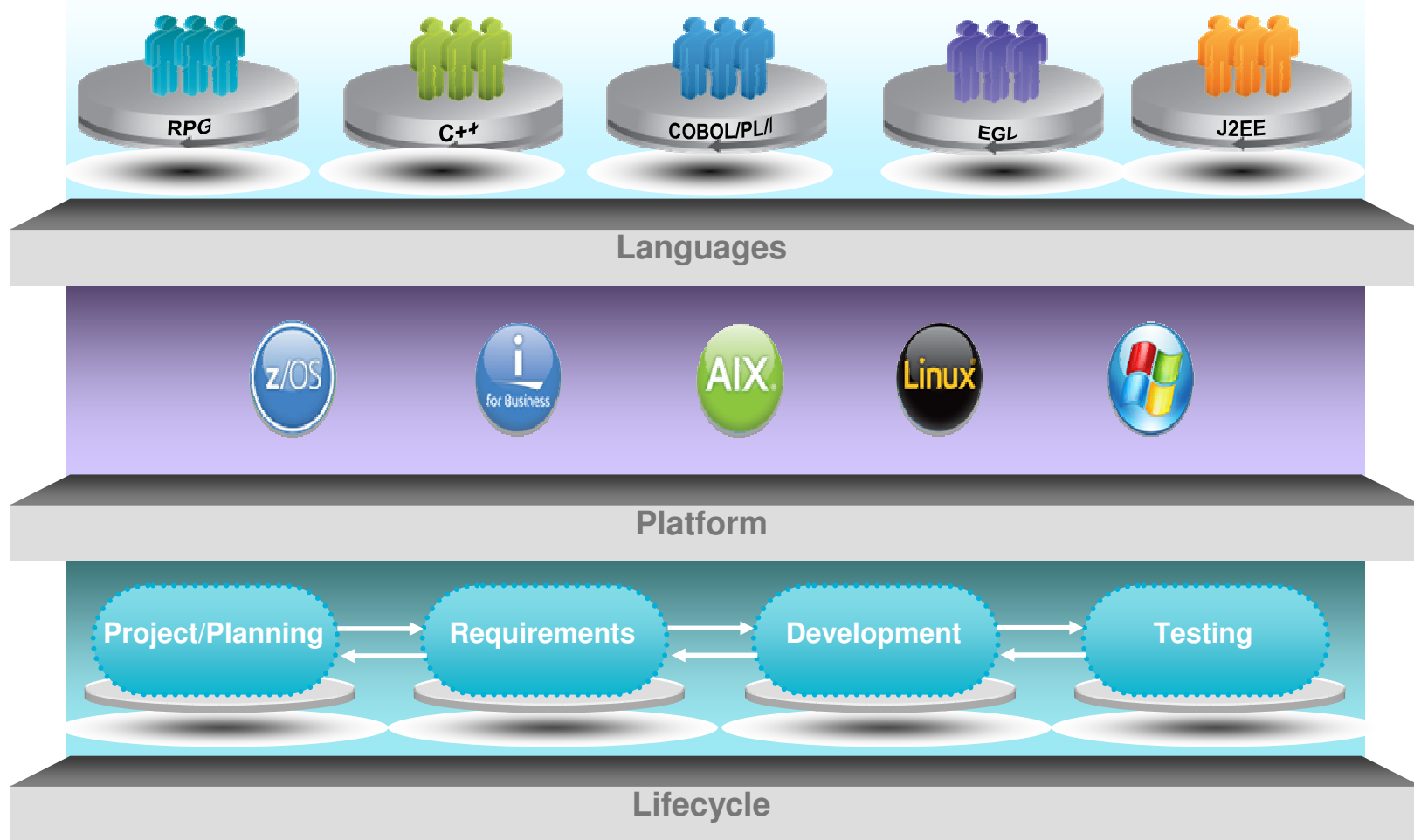
Middleware Complexities Hidden



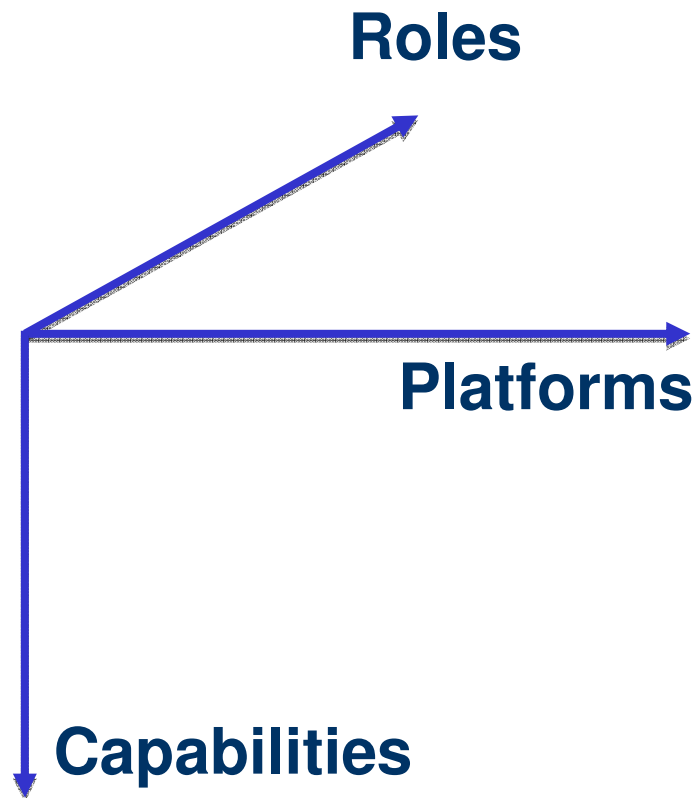
Disconnected Teams and Infrastructure



Integrated Teams and Infrastructure

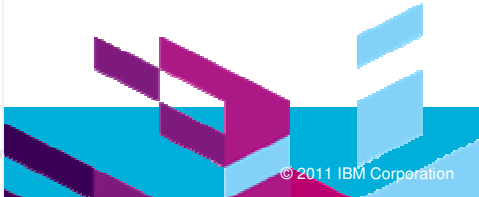


Integration Matters



www.jazz.net

The screenshot shows the Jazz Community Site homepage. At the top, there is a navigation menu with links for Home, About Jazz, Roles, Projects, Downloads, Forums, Library, Development, and Community. Below the menu is the Jazz logo and the tagline: "We're building a new generation of products to make software and systems development more collaborative, productive, and enjoyable." A prominent banner for "CLM 2011 is coming June 14!" features a hand holding a calendar page for June 6th with the handwritten note "8 more sleeps...". The banner text states: "We're delivering our collaborative lifecycle management solution with the new releases of Rational Team Concert, Rational Quality Manager, and Rational Requirements Composer." To the left of the banner, there are three smaller text blocks: "CLM is coming soon! We're delivering our CLM solution on June 14th.", "Jazz Guide to Innovate 2011 We're in sunny Orlando, Florida June 5-9", and "Beta 3 now available Get collaborative lifecycle management in RTC, RQM, RRC". Below the banner is a "Jazz Team Blog" section with two entries: "Announcing the CLM 2011 release: Rational Team Concert, Rational Quality Manager and Rational Requirements Composer 3.0.1" by Adrian Cho Mon, 06 Jun 2011, and "Countdown to CLM 2011: Part 4 - Next generation of requirements definition and management" by Jared Puham Sun, 05 Jun 2011. On the right side of the page, there are several interactive buttons: "Learn about Jazz", "Take a tour of Jazz.net", "Explore development projects", and "Download products". At the bottom right, there is an "Events" section listing "IBM Innovate 2011 June 5-9 05 Jun 2011 - Orlando, FL" and "Jazz/RTC Open Mic Series: CLM with 3.0".



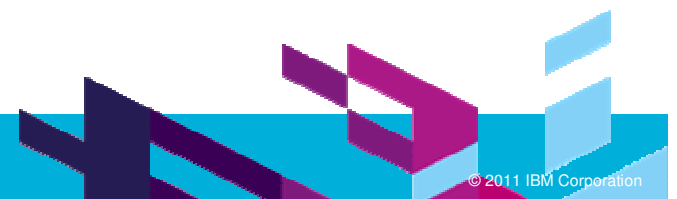


Software. Everywhere.

QUESTIONS



www.ibm/software/rational





www.ibm/software/rational

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